PROCEEDINGS OF THE
ROYAL ENTOMOLOGICAL SOCIETY
OF LONDON

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## ORDINARY MEETING

WEDNESDAY, 4TH MAY, 1949, at 5.30 p.m.

### AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 6th April, 1949.

2. Recommendations of candidates for Fellowship.

3. Announcement of election of new Fellows.

4. Additions to the Library.

*Presented.*

*FIAT review of German Science,* 1939–1946. *Biology, Parts* 3 *and* 4. 8vo. Wiesbaden. 1948. [Board of Trade (German Division). Technical Information and Documents Unit.]

*Purchased.*

*National Parks and access to the countryside Bill.* [Bill 96.] 8vo. London. 1949.

Essig, E. O. *Insects of western North America.* 8vo. New York. 1946.

In addition separates have been presented by Dr. A. M. Massee, Mrs. G. B. Hudson, Mr. M. A. Wynter-Blyth, Dr. H. S. Leeson, Mr. E. F. Gilmour, Mr. R. A. Cumber, Dr. B. P. Uvarov, Dr. B. Jobling, Mr. C. N. Hawkins, Dr. T. A. M. Nash, Mr. T. R. E. Southwood and Miss Barraud.

5. Exhibits.

**Fellows are particularly requested to bring suitable exhibits to the Meeting even though it may not be possible to announce their intention to do so beforehand.**

*Note.*—To avoid congestion in the Library and to enable exhibits to be displayed to greater advantage, a table has been placed in the meeting room for this purpose. Fellows are asked to place their exhibits on this table, with a suitable explanatory note, as soon as possible on the afternoon of the meeting, so that they are available for inspection there before the meeting opens.

6. Admission of Fellows.

7. Communications.

### 1. **Dr. F. I. van Emden.**

The Systematic Position and Ecology of the Semi-Apterous Fly *Mormotomyia hirsuta* Austen (Diptera).

[ABSTRACT]

A large number of specimens of *Mormotomyia*, which Austen knew from two males only, and on which he based his new family MORMOTOMYIIDAE, have been secured by Dr. V. G. L. van Someren. Female, larva and pupa have now been studied, and the morphological characters have been examined in microscopic preparations. The family was originally placed in Acalyptrata and thought to be perhaps related to the BORBORIDAE. The characters are partly those of Acalyptrata, but partly those of Calyptrata, and there appears to be a strong relationship with the CORDYLURIDAE. The ecology is also similar to that of *Scatophaga* apart from the life of the adult in a cave-like cleft of a large boulder. This habitat will be shown in a series of photographs.

### 2. **Dr. J. W. L. Beament, M.A.**

Insect egg-shells.

[ABSTRACT]

The study of insect egg-shells, and in particular the role they play in the natural history of the egg stage, is a comparatively recent development. In the past few years, however, light has been thrown on such problems as the respiration and water conservation of eggs, the ways in which ovicidal poisons may work and, more generally, the relationship between the egg and its environment. The egg-shell and the cuticle are two very different structures which function in a parallel manner, and it is now possible to see some plan underlying the way in which shells are constructed and the importance of the various components to the survival of the egg.

Some of the curious structures which have been regarded as decorations are essential to some physiological function of the egg, or are mechanical results of the way in which eggs are formed and deposited. The devices for facilitating fertilization, hatching, attachment, water uptake, etc., represent a variety of ingenious mechanisms which are revealed by a study of the shell.

### 3. **Prof. G. D. Hale Carpenter, M.B.E., D.M.**

(1) (On behalf of Capt. R. H. R. Stevenson, of Selukwe, S. Rhodesia.) Two "Transfers" of Saturnid moths made by the late E .W. Lanium, and to be presented to the Society.

(2) An unusually fine example of multiple beak-marks associated with beak injuries in a male of *Charaxes etheocles* Cramer, collected by Mr. J. G Williams, of the Coryndon Memorial Museum, Nairobi, Kenya Colony, on 12th February, 1949, in the Kalinzu Forest, Ankole, Western Uganda, and presented by the captor to the Hope Department, Oxford University Museum.

Tea will be served in the Library before the meeting.

**A card index of Fellows' addresses** arranged **on a geographical basis** is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties: elsewhere under Dominions, Colonies, Foreign States, etc.

## ADMISSION OF FELLOWS

**Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 4th May, 1949, is requested to inform the Secretary before 5.15 p.m. on that date.**

### Proceedings of the Ordinary Meeting held on 6th April, 1949.

Dr. V. B. Wigglesworth, F.R.S., President, in the Chair.

Present, 66 Fellows and 20 Visitors.

The minutes of the Joint Meeting with the Food Group of the Society of Chemical Industry held on 23rd February, 1949, and of the Ordinary Meeting held on 2nd March, 1949, were confirmed, and signed by the President.

The names of the following candidates for election were read: For the first time: V. C. P. Almy, B. L. J. Byerley, P. C. Forder, H. D. Swain, and Fritz K. E. Zumpt, Ph.D.

For the second time: F. S. Downing, B.Sc., Abd. el Fattah Khalifa, B.Sc., Ph.D., N. W. Moore, B.A., E. C. Pelham-Clinton, A. de Porochin, J. R. T. Short, B.Sc., W. J. Stower, B.Sc., and A. W. Vaughan, M.R.C.V.S.

The Secretary read the names of the following newly elected Fellows of the Society: Major E. L. B. James, Leigham House, Marsh Mills, Plymouth; G. H. Jones, M.P.S., 9, Studland Road, Bournemouth.

Thanks were voted to donors of gifts to the Library since the last meeting.

The President announced the death of Dr. A. D. Imms, F.R.S., elected an Ordinary Fellow in 1912, a Special Life Fellow in 1944, and President of the Society in 1936–37.
The death was also reported of S. A. Chartres, elected in 1938.

Mr. R. C. B. Hartland-Rowe, Mr. J. F. Burton and Miss D. M. Evans signed the Obligation Book and were admitted Fellows of the Society.

A communication on the subject of Tsetse control was made by Mr. W. H. Potts, an abstract of which appeared on p. 10.

The President, Prof. G. D. Hale Carpenter, Mr. C. N. Hawkins and Dr. F. van Emden took part in the subsequent discussion.

In addition, Mr. P. F. Mattingly exhibited a female specimen of *Armigeres flavus* Leicester (Diptera, CULICINAE), and drew attention to its curious egg-laying habits. He said that the mosquito was widely distributed in the Oriental Region, and laid its eggs on its own hind legs. The legs were then dipped into the water contained in cut bamboos, coconut shells, etc., which served as breeding-places. It appeared probable that more than one immersion was necessary to ensure hatching, since, when an adult mosquito was caught with an egg mass attached to its leg, the larval heads could sometimes be seen protruding from the eggs. This behaviour was somewhat reminiscent of that found in the genus *Culex*, in which the egg rafts were formed by oviposition on the surface of the water between the crossed hind legs. In this case, however, the egg raft, which was believed to be held together by minute irregularities on the surface of the eggs rather than by any adhesive secretion, was left by the female entirely free on the surface of the water. In the specimen exhibited the hind legs appeared to be firmly bound together by the egg mass.

Mr. H. Oldroyd exhibited mud cylinders formed by Tabanid larvae (Diptera), and said that these cylinders were first discovered by Dr. W. A. Lamborn in 1929 in a dried-up water hole in Nyasaland. A number of them contained living pupae, from which emerged *Tabanus biguttatus* Wiedemann. He went on to describe the method by which the cylinders were formed and pointed out the value of this habit in protecting the larva from exposure when the mud cracked during the dry season.

Professor Buxton said that these larvae were also found in sandy areas where the cylinders could not be formed. He wondered how this habit could have evolved, and whether the larvae made any attempt to form a cylinder in an unsuitable medium.

N. D. RILEY, *Honorary Secretary.*

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The next meeting will be held on 1st June at 5.30 p.m.

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